

PESTICIDE CONSUMPTION AND PERINATAL OUTCOMES IN BRAZIL

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Background and Aims: to evaluate the degree of correlation between pesticide consumption in all Brazilian states in 2000 and perinatal outcomes the period between 2001 and 2005.

Material and Methods: Informations about perinatal outcomes occurred in children born from 2001 to 2005 were collected from National Birth System. Spearman's correlation coefficients were obtained for pesticide consumption (per capita), total and types (herbicide, acaricide, fungicide, insecticide) and the following types of perinatal outcomes: low birth weight, preterm delivery, sex ratio and congenital abnormalities and twin births. In addition, states were divided into three groups according to their level of pesticide use (tertiles) and prevalence ratios were then calculated using first tertile as reference.

Results: Pesticide consumption showed moderate positive correlation with congenital abnormalities ($r=0,469$, $p=0,016$), low birth weight ($r=0,498$, $p=0,010$), preterm delivery ($r=0,419$, $p=0,033$), cryptorchidism ($r=0,452$, $p=0,020$), spontaneous abortion ($r=0,499$, $p=0,009$) and twin birth ($r=0,672$, $p<0,001$). We also observed weak and non-significant negative correlation between pesticide consumption and sex ratio ($r=-0,383$, $p=0,053$). For most of perinatal outcomes, perinatal outcomes' prevalence rates were higher in the states of moderate (2nd tertile) and high (3rd tertile) pesticide consumption.

Conclusions: Moderate-to-high correlation coefficients between pesticide consumption and some perinatal consumption were observed. The results suggest that population exposure to pesticides in 1999 in Brazilian states may have been associated with selected types of perinatal outcomes in the 2000s.